[STRUCTURE OF A MEMORY DEVICE AND FABRICATION METHOD THEREOF]

Abstract of Disclosure

A memory device and a fabrication method thereof, wherein the memory device includes a gate oxide layer disposed on a surface of the substrate and a gate disposed on a portion of the gate oxide layer. A buried drain line is located in the substrate beside both sides of the gate and a spacer is disposed beside the sidewalls of the gate. A deep doped region is located in the substrate below a portion of the buried drain line, wherein the buried drain line and the deep doped region together serve as a word line for the memory device. An insulation layer is disposed above the bit line and a word line is disposed above the gate and the insulation layer, perpendicular to a direction of the bit line.

Figures